Merus

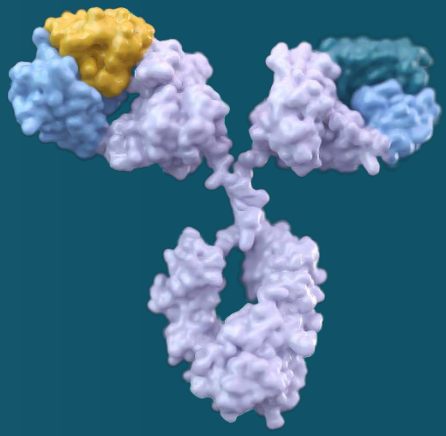
Year End 2017 Review – April 26, 2018

Merus closing in on cancer

Disclaimer

This presentation (including any oral commentary that accompanies this presentation) contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this presentation that do not relate to matters of historical fact should be considered forward-looking statements, including without limitation statements regarding the impact our Biclonics® platform can have on cancer, our product candidates' potential to treat certain types of tumors, the timing of regulatory filings and the timing and anticipated results from our clinical trials. These forward-looking statements are based on management's current expectations. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including, but not limited to, the following: we have incurred significant losses, are not currently profitable and may never become profitable; our need for additional funding, which may not be available and which may require us to restrict out operations or require us to relinquish rights to our technologies or bispecific antibody candidates; potential delays in regulatory approval, which would impact our ability to commercialize our product candidates and affect our ability to generate revenue; the unproven approach to therapeutic intervention of our Biclonics® technology; our limited operating history; economic, political, regulatory and other risks involved with international operations; the lengthy and expensive process of clinical drug development, which has an uncertain outcome; the unpredictable nature of our early stage development efforts for marketable drugs; potential adverse public reaction to the use of cancer immunotherapies; potential delays in enrollment of patients, which could affect the receipt of necessary regulatory approvals; failure to obtain marketing approval internationally; failure to compete successfully against other drug companies; potential competition from other drug companies if we fail to obtain orphan drug designation or maintain orphan drug exclusivity for our products; our reliance on third parties to conduct our clinical trials and the potential for those third parties to not perform satisfactorily; our reliance on third parties to manufacture our product candidates, which may delay, prevent or impair our development and commercialization efforts; protection of our proprietary technology; our patents being found invalid or unenforceable; potential lawsuits for infringement of third-party intellectual property; our ability to attract and retain key personnel; managing our growth could result in difficulties; and we may lose our foreign private issuer status and incur significant expenses as a result.

These and other important factors discussed under the caption “Risk Factors” in our Annual Report on Form 20-F filed with the Securities and Exchange Commission, or SEC, on April 28, 2017, and our other reports filed with the SEC, could cause actual results to differ materially from those indicated by the forward-looking statements made in this presentation. Any such forward-looking statements represent management's estimates as of the date of this presentation. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change



Pipeline & Milestones Overview

Ton Logtenberg, Ph.D., Chief Executive Officer

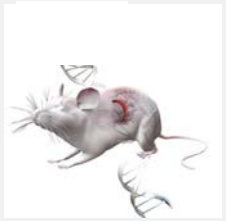
Merus closing in on cancer

Biclonics® Technology Platform – the full length IgG format

A distinctive suite of proprietary technologies supports the discovery and development of bispecific antibodies with differentiated modes of action

Human antibodies

- MeMo® transgenic mouse for large panels of diverse and high quality common light chain antibodies

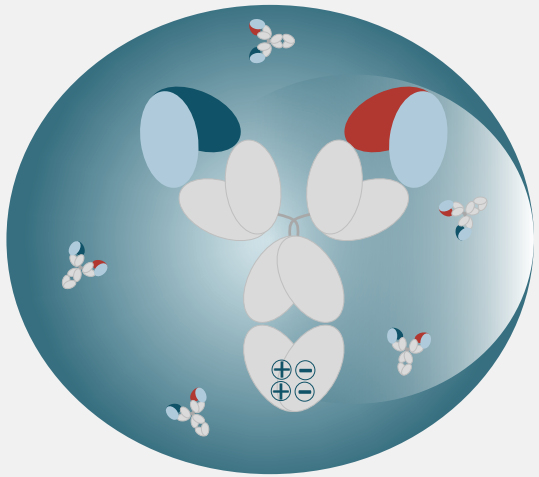


Predictable *in vivo* behavior

- IgG-like half life
- Low immunogenicity In patients

Biclonics®

Full length IgG human bispecific antibodies – common light chain



Dependable IgG format with true platform characteristics

Functional flexibility

- CH3 engineered for essentially pure Biclonics® from single cells
- Fc silencing for added safety
- Enhanced ADCC for higher potency

Manufacturability

- 80-99% Biclonics® in crude cell harvest
- Stability: > 60 passages
- Yield: up to 4.5 g/L achieved- 2000L
- Standard IgG formulation

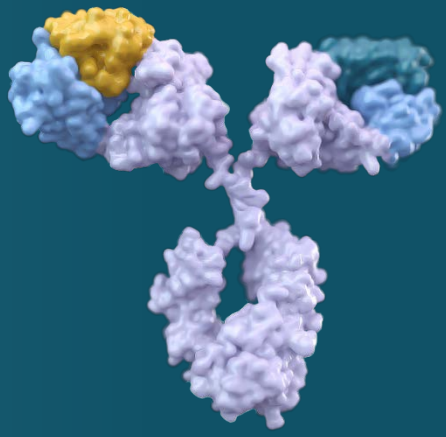
Merus closing in on cancer

Robust Pipeline Targeting Solid and Hematological Tumors

Program	Targets	Indication/drug combination	Pre-IND/CTA	Phase 1	Phase 2	Collaborator	Merus rights
MCLA-128	HER2, HER3	Breast (HER2+) + Herceptin + chemo					worldwide
		Breast (ER+) + hormone therapy					worldwide
		Solid tumors (monotherapy)*					worldwide
MCLA-117	CD3, CLEC12A	AML					worldwide
MCLA-158	EGFR, Lgr5	Solid tumors					worldwide
MCLA-145	PD-L1, undiscl.	Solid tumors				Incyte	US
------	Undisclosed	Autoimmune disease				Ono	No product rights

*Phase 1/2

Merus closing in on cancer



MCLA-128

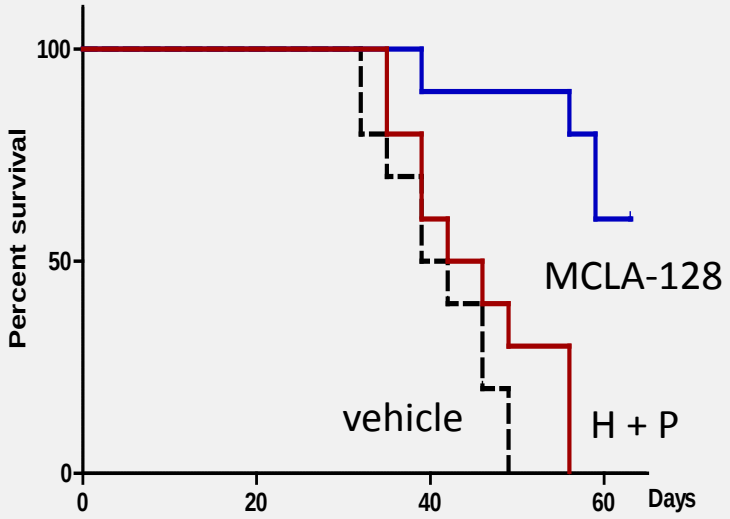
Biclonics® that potently inhibits the HER3 pathway

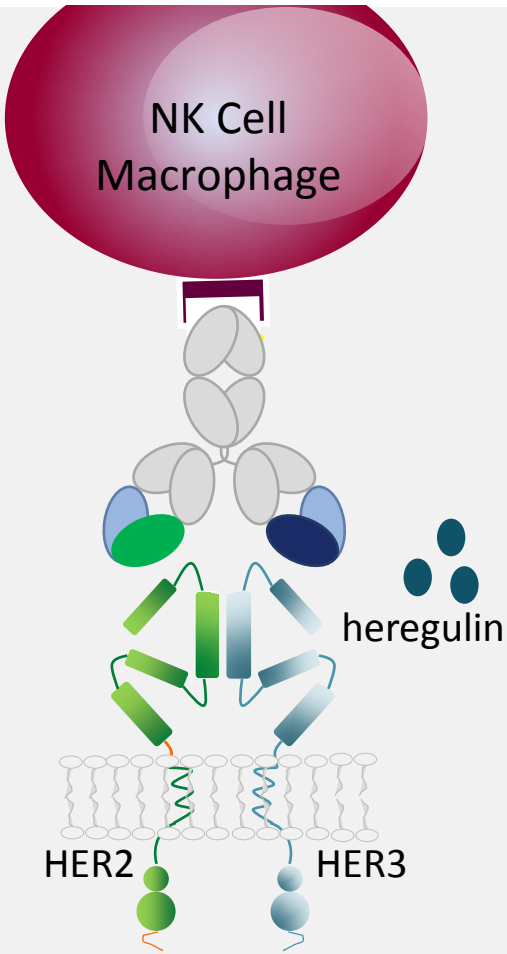
- a driver of tumor growth and survival

MCLA-128 unique mechanism of action

- **Dock** on HER2, abundantly expressed on tumor cells
- **Block** HER3 signaling, even under high heregulin stress
- **Enhanced ADCC** - efficient recruitment of immune killer cells

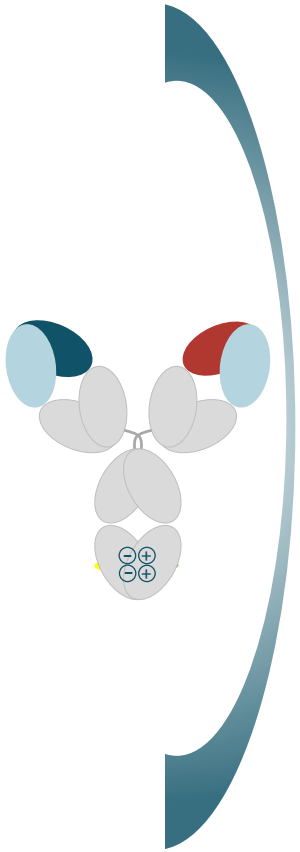
- *In preclinical studies, more effective than Herceptin (H) + Perjeta (P) in inhibiting the growth of cell lines resistant to HER2-targeted therapies*





Merus closing in on cancer

MCLA-128 phase 1/2 trial - monotherapy



Part 1
dose escalation

Attractive safety profile
Mild to moderate AEs (G1-2); no DLTs

Recommended dose
750 mg flat; IV infusion over 2 hour period; q3ws

Early signs of activity

Part 2
expansion cohorts

HER2+/amplified

- Breast (n=11)
- Gastric

HER2 non-amplified

- Endometrial
- Ovarian
- NSCLC

POC achieved

- heavily pretreated; 2-5 anti-HER therapies
- visceral involvement: lung, liver, brain
- 1 PR and 7 SD (4 lasting ≥ 5 months)
- clinical benefit rate 64%

→ Phase 2 combination trial in mBC

- HER2+
- ER+/ HER2^{low}

Merus closing in on cancer

MCLA-128 phase 2 combination trial in HER2+ mBC

Target population

HER2+ (2+ 3+ IHC/FISH+) metastatic breast cancer

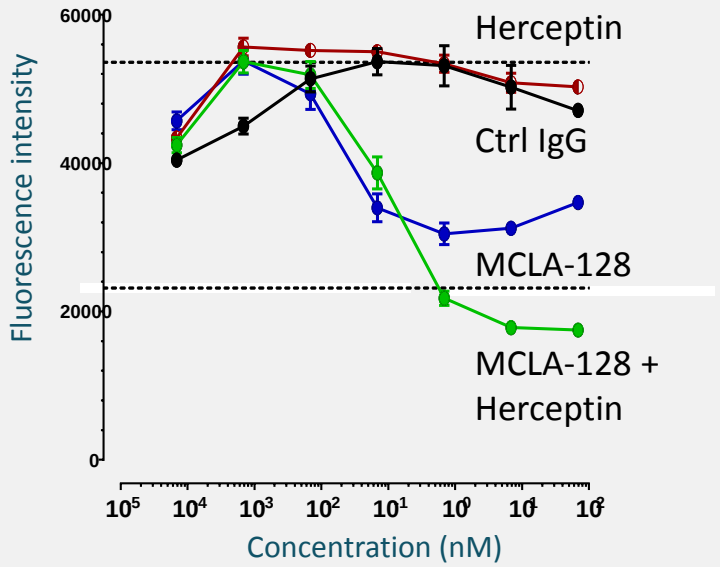
Failing 2-4 prior HER2 therapies (including T-DM1)
N = ~60

Triplet

MCLA-128
+
Herceptin +/- chemo

Rationale

Preclinical studies: MCLA-128 and Herceptin synergize in inhibiting heregulin-driven tumor cell growth



Positioning

HER2+ mBC patients, progressed to Herceptin/ Perjeta / chemo/ T-DM1

1st line: Herceptin + Perjeta + chemo

2nd line: T-DM1; POC

3nd-5th line: Herceptin + chemo; Lapatinib + Capecitabine

3nd-5th line: Herceptin + MCLA-128 +/- chemo

Merus closing in on cancer

MCLA-128 phase II combination trial in ER+/HER2^{low} mBC

Target population

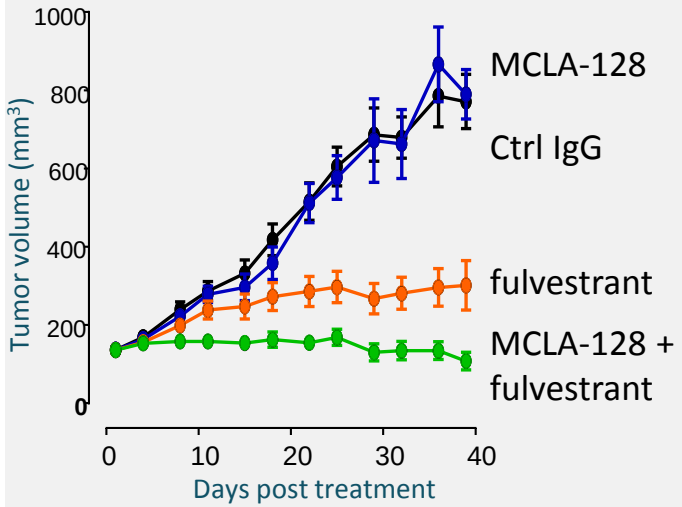
ER+/HER2-low metastatic breast cancer (N = ~60)

Failing ≥1 prior endocrine therapy / CDK4-6 inhibitor (N = ~60)

MCLA-128 + Endocrine therapy

Rationale

In preclinical models, blocking HER3 signaling has been shown to synergize with endocrine therapy



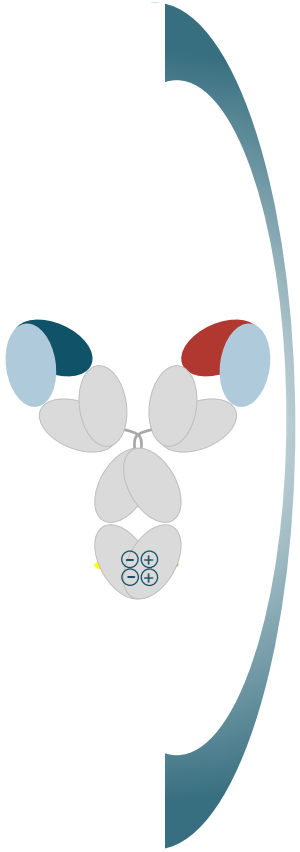
Positioning

ER+/HER-2low mBC patients, post endocrine therapy (refractory), post palbociclib

1st line		AI Tamoxifen	Fulvestrant Letrazole + palbociclib
2nd line	MCLA-128 + Endocrine therapy	AI Tamoxifen	Fulvestrant Letrozole + palbociclib Exemestane + everolimus
3nd - 5th line		Defined according to previous 2 lines	

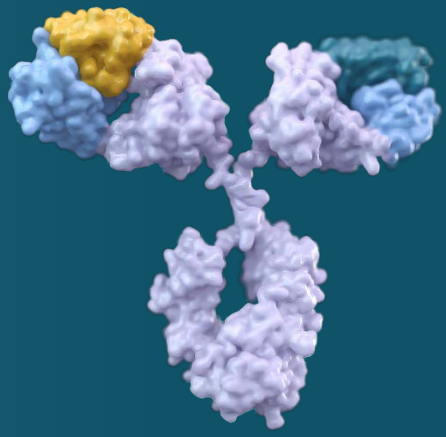
Merus closing in on cancer

MCLA-128 near term milestones



Near term clinical milestones		
2018	⊙ Breast cancer: MCLA-128 phase 2 combination trial (EU/US) initiated • MCLA-128 with Herceptin +/- chemotherapy in HER2+ mBC failing 2-4 prior HER2 therapies (including T-DM1) • MCLA-128 with endocrine therapy in ER+/HER2^{low} mBC failing ≥1 prior endocrine therapies / CDK4-6 inhibitor	✓
	⊙ MCLA-128 phase 1/2 monotherapy trial of gastric, ovarian/endometrium and NSCLC cohorts • Update in Q4 2018	**Q4**

Merus closing in on cancer

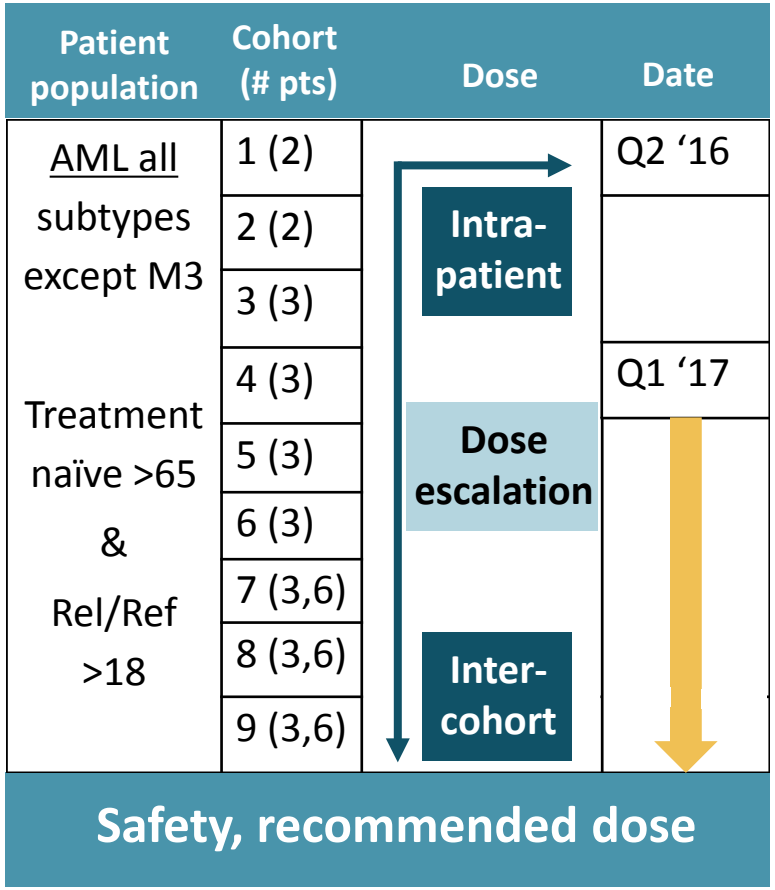


MCLA-117

CD3 x CLEC12A T cell engager Biclonics® binding a first-in-class target expressed on acute myeloid leukemia (stem) cells

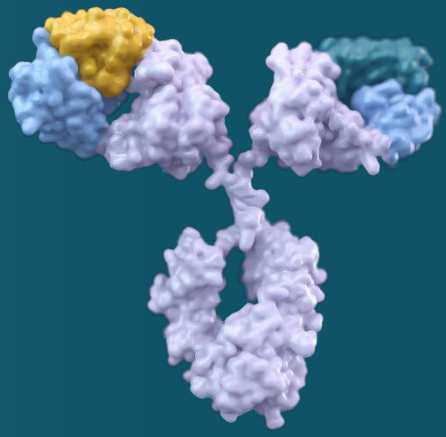
Merus closing in on cancer

MCLA-117 phase 1 trial build up and near-term clinical milestones



Near term clinical milestones	
✓	⊙ Dose escalation of the phase 1 clinical trial in AML continuing ⊙ IND application to the U.S. Food and Drug Administration approved
2018	⊙ Report on safety and potentially early activity

Merus closing in on cancer



MCLA-158

Biclonics® that potently blocks EGFR signaling in Wnt-activated solid tumors

Merus closing in on cancer

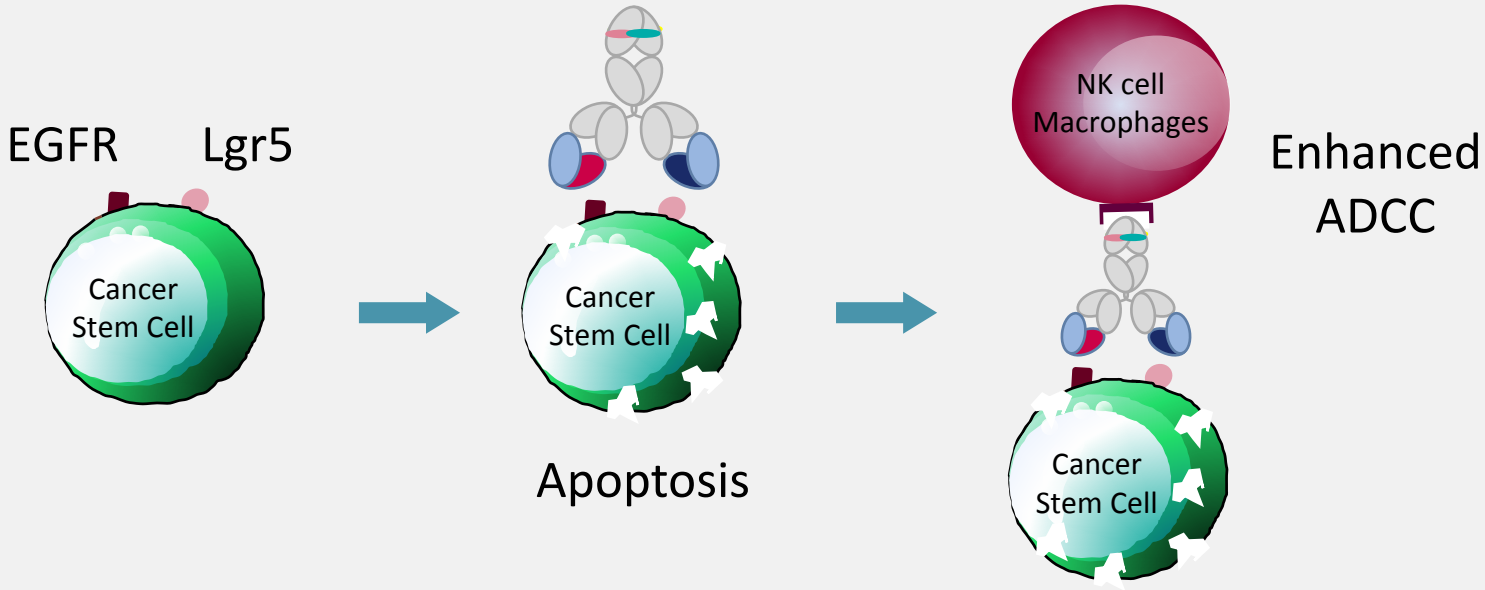
MCLA-158 unique mechanism of action

Unmet Medical Need

- Designed to eliminate cancer stem cells that persist in various solid tumors and cause relapse and metastasis
- RAS-mutant colorectal cancer represents approximately 50% of disease

Differentiated Mode of Action

- Potently blocks EGFR signaling in Wnt activated tumors
- Induces apoptosis in cancer (stem) cells
- Enhanced ADCC for immune effector cell recruitment



MCLA-158 milestones

Near term milestones	
✓	⊙ CTA for a first in human phase 1 clinical trial in solid tumors in the EU approved
	⊙ Submitted IND to the FDA
Q2 2018	⊙ Start of a phase 1 clinical trial with MCLA-158

Merus closing in on cancer

Robust Pipeline Targeting Solid and Hematological Tumors

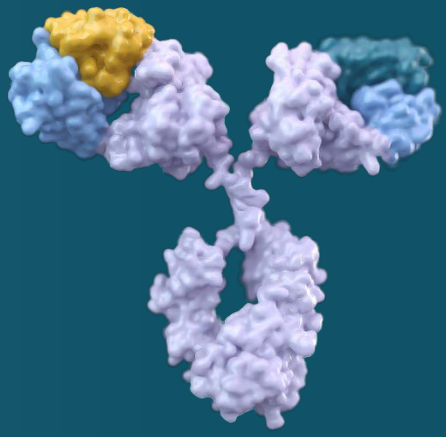
Program	Targets	Indication/drug combination	Pre-IND/CTA	Phase 1	Phase 2	Collaborator	Merus rights
MCLA-128	HER2, HER3	Breast (HER2+) + Herceptin + chemo					worldwide
		Breast (ER+) + hormone therapy					worldwide
		Solid tumors (monotherapy)*					worldwide
MCLA-117	CD3, CLEC12A	AML					worldwide
MCLA-158	EGFR, Lgr5	Solid tumors					worldwide
MCLA-145	PD-L1, undiscl.	Solid tumors				Incyte	US
------	Undisclosed	Autoimmune disease				Ono	No product rights

*Phase 1/2

Merus closing in on cancer

Recent Patent Portfolio Updates

MCLA-117	In March 2018, the United States Patent and Trademark Office (USPTO) granted U.S. Patent No. 9,914,777 covering MCLA-117 (CD3, CLEC12A)
Spleen to Screen™ Technology	Also in March, the USPTO granted U.S. Patent No. 9,908,946 concerning Merus' proprietary Spleen to Screen™ technology, a part of its Biclonics® technology platform.
Regeneron Appeal	In December, the United States Court of Appeals for the Federal Circuit denied Regeneron's request for a rehearing and rehearing en banc to reconsider its decision affirming that Regeneron engaged in inequitable conduct before the USPTO while prosecuting the U.S. Patent No. 8,502,018 ('018 patent), entitled "Methods of Modifying Eukaryotic Cells."



R&D Collaborations

Hui Liu, Ph.D., Chief Business Officer

Platform deals 2017/18 - highlights

Incyte (2017)

- Total $200m up-front
  - Platform license: $120m
  - Equity investment at premium: $80m
- Up to 11 bispecific antibody programs in oncology
  - Merus retains US rights on 1 program and opt-in rights on 2 programs
  - Incyte pays R&D costs for up to 8 programs – milestones and royalties

- Platform validation
- Substantial cash component
- Product rights and opt ins for more value creation

Simcere (2018)

- An exclusive license to develop and commercialize in China, 3 bispecific antibodies in immuno-oncology
  - Merus retains all rights outside of China
- Upfront payment, potential development / commercial milestones and tiered royalty payments on sales in China from Simcere

- Platform validation
- Substantial product rights
- Access to China CMC
- Access to treatment naïve patients

Merus closing in on cancer

Partnerships 2018 - highlights

Ono (2014/2018)

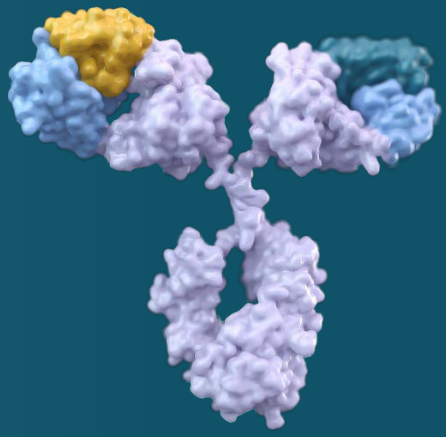
- Exercised option under 2014 agreement
  - Undisclosed financials
- Developing bispecific derived from Biclonics® platform for the treatment of autoimmune diseases

- Built on success of existing collaboration
- Unmet medical need

VHIO (2018)

- Builds upon existing relationship with MRUS
- Trial site for MCLA-128 MBC study; MCLA-158 preclinical development
- VHIO's strong preclinical and clinical research capabilities to help accelerate pipeline developments

- Translational and biological insights
- Support development of existing and future pipeline



Financial Review

John Crowley, Chief Financial Officer

Financial Overview

€190.8 million

Cash, cash equivalents and investments as of December 31, 2017

$55.8 million

Gross proceeds from private placement completed in February 2017 for 3.1 million shares

End of 2020

Expected cash runway based on current operating plan

Merus closing in on cancer

Select Financial Information

	2017	2016
Net cash used in operations	€37.4m	€25.7m
Net loss	€73.0m	€47.2m
Net loss per share	€3.80	€3.57
Significant non-cash charges:		
Unrealized foreign exchange loss	€15.8m	€0.4m
Share-based compensation expense	€12.8m	€3.3m
Incyte financial derivative	€10.7m	€19.2m
Common shares outstanding as of December 31st	19.4m	16.1m

Merus

Closing in on Cancer with Bispecific Antibodies